

State/Industry Ambient Monitoring Network

Air Quality Report

4th Quarter 2002

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North Dakota Department of Health

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SECTION ONE

DISCUSSION OF MONITORING RESULTS

Sulfur Dioxide (SO₂)

There were no exceedances of the state or federal standards during the quarter. The maximum 1-hour concentration was 125 ppb on September 19 at Mandan - SPM; the maximum 3-hour concentration was 95 ppb on September 19 at Mandan - SPM; and, the maximum 24-hour concentration was 22 ppb on September 19 at Mandan - SPM . All sites achieved at least an 80% data recovery for the period.

Sulfur Dioxide (SO₂) 5-Minute Average

The maximum 5-minute concentration was 232 ppb on July 3 at Bear Paw - MGP #5.

Ozone (O₃)

There was no exceedance of the ozone standard during the quarter. The maximum observed 1-hour concentration was 72 ppb on August 7 at Beulah - North. The 4th highest 8-hour concentration was 60 ppb on July 19 at TRNP - SU (Painted Canyon) and Beulah - North.

Nitrogen Dioxide (NO₂)

The maximum 1-hour concentration observed was 37 ppb on September 26 at Fargo NW. All sites achieved at least an 80% data recovery for the period operated except Hannover.

Ammonia (NH₃)

Due to delays receiving repair parts, the analyzer was down the entire quarter.

The data is used as part of the ambient data input used by the newer dispersion models.

Inhalable Continuous PM_{2.5} Particulates

The maximum 1-hour concentration was 145.4 $\mu\text{g}/\text{m}^3$ on July 24 at Beulah - North. The maximum 24-hour concentration was 23.9 $\mu\text{g}/\text{m}^3$ on July 24 at Beulah - North. All sites achieved at least an 80% data recovery for the period operated..

Inhalable FRM PM_{2.5} Particulates

The maximum 24-hour average concentration was 21.2 $\mu\text{g}/\text{m}^3$ on July 19 at Fargo NW. All sites achieved at least an 80% data recovery for the period.

Inhalable PM₁₀ Particulates

There was no exceedance of the 24-hour standard during the quarter. The maximum 24-hour average concentration was 44.0 $\mu\text{g}/\text{m}^3$ on July 1 at Fargo NW. An 80% data recovery was achieved for the period operated except TRNP - NU.

SECTION TWO

AMBIENT AIR QUALITY DATA

SUMMARIES

COMPARISON OF AIR QUALITY DATA WITH
THE NORTH DAKOTA AMBIENT AIR QUALITY STANDARDS *

POLLUTANT : Sulfur Dioxide (ppb)

LOCATION	YEAR	SAMPLING PERIOD	NUM OBS	M		A		X		I		M		A		ARITH MEAN	1HR #>273	24HR #>99	% >MDV
				1ST MM/DD/HH	- HOUR 2ND MM/DD/HH	1ST MM/DD/HH	- HOUR 2ND MM/DD/HH	1ST MM/DD/HH	- HOUR 2ND MM/DD/HH	1ST MM/DD/HH	- HOUR 2ND MM/DD/HH	24 1ST MM/DD	- HOUR 2ND MM/DD	24 1ST MM/DD	- HOUR 2ND MM/DD				
Amerada Hess - Tioga #1	2002	OCT-DEC	2177	140 10/24/02	134 10/25/03	86 10/24/02	73 10/24/05	47 10/24	15 10/23	2.3		11.6							
Amerada Hess - Tioga #3	2002	OCT-DEC	2177	118 10/22/06	115 12/18/12	82 10/29/17	74 12/18/14	20 12/18	16 10/22	3.6		19.1							
Bear Paw - MGP #3	2002	OCT-DEC	2007	9 11/09/19	7 12/20/12	6 11/09/20	4 12/22/02	2 12/20	2 10/22	1.1		4.4							
Bear Paw - MGP #5	2002	OCT-DEC	2192	8 12/31/17	6 12/16/20	4 12/21/17	4 12/31/05	2 12/31	2 12/22	1.1		4.9							
Beulah - North	2002	OCT-DEC	2195	19 10/20/10	18 12/08/12	15 10/20/11	14 12/08/14	4 10/20	3 10/08	1.4		11.9							
DGC #12	2002	OCT-DEC	2192	22 12/02/08	20 11/06/12	16 11/29/11	16 12/02/08	6 12/19	5 11/22	1.8		20.3							
DGC #14	2002	OCT-DEC	2167	22 10/09/15	21 11/09/09	14 12/02/11	13 10/21/11	5 12/02	4 11/07	1.5		11.2							
DGC #16	2002	OCT-DEC	2187	31 12/29/02	22 12/02/10	16 11/06/14	14 12/15/14	5 12/02	4 12/29	1.4		9.1							
DGC #17	2002	OCT-DEC	2193	37 12/29/03	28 11/08/22	23 12/29/05	17 12/02/11	6 11/08	6 12/29	1.5		24.7							
Dunn Center	2002	OCT-DEC	2196	15 10/21/15	11 12/02/07	7 10/21/17	6 12/02/08	3 10/20	2 10/21	1.1		8.2							
Fargo NW	2002	OCT-DEC	2163	6 12/25/03	6 12/25/04	6 12/25/05	4 12/25/08	3 12/25	2 12/29	1.1		4.9							
Hannover	2002	OCT-DEC	2191	23 10/28/22	21 12/03/13	17 12/24/02	13 10/27/14	4 12/24	4 11/08	1.6		19.7							
Mandan - SPM	2002	OCT-DEC	2195	102 12/22/19	96 12/19/18	66 12/22/20	63 11/20/23	27 11/21	20 10/08	5.0		38.0							
Mandan NW - SPM	2002	OCT-DEC	2102	55 12/16/03	49 10/27/19	35 12/16/05	33 10/27/20	10 12/17	9 10/27	2.7		32.4							

COMPARISON OF AIR QUALITY DATA WITH
THE NORTH DAKOTA AMBIENT AIR QUALITY STANDARDS *

POLLUTANT : SULFUR DIOXIDE (ppb)

LOCATION	YEAR	SAMPLING PERIOD	NUM OBS	1 - HOUR		3 - HOUR		24 - HOUR		ARITH MEAN	1HR #>273	24HR #>99	% >MDV
				1ST MM/DD/HH	2ND MM/DD/HH	1ST MM/DD/HH	2ND MM/DD/HH	1ST MM/DD	2ND MM/DD				
TRNP - NU	2002	OCT-DEC	2192	6 12/05/09	5 10/20/11	5 12/05/11	4 10/20/11	2 10/29	2 12/03	1.1			5.7
TRNP - SU (Painted Canyon)	2002	OCT-DEC	2196	26 10/10/14	15 10/24/14	10 10/24/17	9 10/10/14	3 10/24	3 10/10	1.1			5.0
White Shield	2002	OCT-DEC	2187	17 10/27/13	14 12/16/20	11 10/27/14	11 12/31/20	4 12/31	3 12/16	1.3			7.6

The maximum 1-hour concentration is 140 ppb at Amerada Hess - Tioga #1 on 10/24/02
The maximum 3-hour concentration is 86 ppb at Amerada Hess - Tioga #1 on 10/24/02
the maximum 24-hour concentration is 47 ppb at Amerada Hess - Tioga #1 on 10/24

* The air quality standards are:

STATE Standards -

- 1) 273 ppb maximum 1-hour average concentration.
- 2) 99 ppb maximum 24-hour average concentration.
- 3) 23 ppb maximum annual arithmetic mean concentration.

FEDERAL Standards -

- 1) 500 ppb maximum 3-hour concentration not to be exceeded more than once per year.
- 2) 140 ppb maximum 24-hour concentration not to be exceeded more than once per year.
- 3) 30 ppb annual arithmetic mean.

COMPARISON OF AIR QUALITY DATA WITH
THE NORTH DAKOTA AMBIENT AIR QUALITY STANDARDS *

POLLUTANT : Sulfur Dioxide 5-Minute Averages (ppb)

LOCATION	YEAR	PERIOD	OBS	5 - M I N U T E		M A X I M A		# HOURS >600	% >MDV		
				1ST MM/DD/HH	DATE MM/DD/HH	2ND MM/DD/HH	DATE MM/DD/HH				
Amerada Hess - Tioga #1	2002	OCT-DEC	2177	301	10/24/00	273	10/25/01	249	10/24/02	0	17.7
Amerada Hess - Tioga #3	2002	OCT-DEC	2177	302	10/22/11	280	10/22/06	271	10/29/17	0	28.9
Bear Paw - MGP #3	2002	OCT-DEC	2007	30	11/09/19	19	12/20/12	14	10/22/14	0	11.5
Bear Paw - MGP #5	2002	OCT-DEC	2192	15	12/15/15	13	12/29/09	13	12/31/17	0	11.0
Beulah - North	2002	OCT-DEC	2195	50	10/05/10	47	12/08/12	33	12/08/13	0	19.0
Dunn Center	2002	OCT-DEC	2196	25	10/21/15	25	12/02/07	11	10/28/10	0	21.0
Fargo NW	2002	OCT-DEC	2163	8	12/29/10	7	10/13/22	7	11/06/21	0	9.8
Hannover	2002	OCT-DEC	2191	55	10/28/22	45	12/03/13	40	10/22/12	0	30.8
Mandan - SPM	2002	OCT-DEC	2195	155	12/19/17	153	12/30/00	151	11/22/20	0	50.4
Mandan NW - SPM	2002	OCT-DEC	2102	126	12/03/06	116	12/29/14	99	12/16/03	0	48.1
TRNP - NU	2002	OCT-DEC	2192	15	10/29/10	13	10/29/11	9	10/07/15	0	11.1
TRNP - SU (Painted Canyon)	2002	OCT-DEC	2196	53	10/10/14	32	10/10/15	25	10/09/09	0	11.1

The maximum 5-minute concentration is 302 ppb at Amerada Hess - Tioga #3 on 10/22/11

* No Standard is currently in effect:

COMPARISON OF AIR QUALITY DATA WITH
THE NORTH DAKOTA AMBIENT AIR QUALITY STANDARDS *

POLLUTANT : Ozone (PPB)

LOCATION	YEAR	SAMPLING PERIOD	NUM OBS	M A X I M A		8 - HOUR		4TH MM/DD/HH	1HR #>120	8HR #>80
				1ST MM/DD/HH	2ND MM/DD/HH	1ST MM/DD/HH	2ND MM/DD/HH			
Beulah - North	2002	OCT-DEC	2196	50 10/10/14	49 10/10/15	42 10/10/10	35 10/10/11	35 10/10/09	35 10/13/10	
Dunn Center	2002	OCT-DEC	2198	52 10/10/14	51 10/10/15	46 10/10/09	38 10/10/10	38 10/10/08	38 10/10/11	
Fargo NW	2002	OCT-DEC	2166	40 10/14/14	37 10/02/15	37 12/20/22	34 12/20/21	34 12/20/20	34 12/20/23	
Hannover	2002	OCT-DEC	2194	43 10/10/13	43 10/10/14	39 10/10/09	33 10/10/08	33 10/10/10	33 10/10/07	
TRNP - NU	2002	OCT-DEC	2196	68 11/27/14	53 10/10/14	47 10/10/09	40 10/10/08	40 10/10/10	40 10/10/07	
TRNP - SU (Painted Canyon)	2002	OCT-DEC	2196	68 10/10/15	62 10/10/14	49 10/10/10	38 10/10/09	38 10/10/11	38 10/10/12	

The maximum 1-hour concentration is 68 ppb at TRNP - NU on 11/27/14
The 4th highest 8-hour concentration is 40 ppb at TRNP - NU on 10/10/07

* The air quality standards for ozone are:
STATE - 120 ppb not to be exceeded more than once per year.

FEDERAL - Fourth highest daily maximum 8-hour averages for a 3-year period not to exceed 80 ppb.

COMPARISON OF AIR QUALITY DATA WITH
THE NORTH DAKOTA AMBIENT AIR QUALITY STANDARDS *

POLLUTANT : Nitrogen Dioxide (ppb)

LOCATION	YEAR	SAMPLING PERIOD	NUM OBS	M A X I M A		ARITH MEAN	% >MDV
				1ST MM/DD/HH	2ND MM/DD/HH		
Beulah - North	2002	OCT-DEC	1987	15 10/02/05	15 10/02/06	2.6	60.0
DGC #12	2002	OCT-DEC	2177	23 10/22/00	21 11/08/01	2.8	61.8
DGC #17	2002	OCT-DEC	2186	18 12/02/10	16 12/02/09	2.4	61.0
Dunn Center	2002	OCT-DEC	2191	12 12/18/02	12 12/18/03	1.5	28.5
Fargo NW	2002	OCT-DEC	2139	30 12/24/20	30 12/24/21	6.1	78.4
Hannover	2002	OCT-DEC	2187	27 12/24/03	24 12/24/00	2.2	43.5
TRNP - NU	2002	OCT-DEC	2187	7 11/13/19	7 12/17/02	1.3	22.2

The maximum 1-hour concentration is 30 ppb at Fargo NW on 12/24/20

* The air quality standards are:
STATE - 53 ppb maximum annual arithmetic mean.

FEDERAL - 53 ppb annual arithmetic mean.

COMPARISON OF AIR QUALITY DATA WITH
THE NORTH DAKOTA AMBIENT AIR QUALITY STANDARDS *

POLLUTANT : Ammonia (ppb)

LOCATION	YEAR	SAMPLING PERIOD	NUM OBS	M A X I M A					
				1ST MM/DD/HH	2ND MM/DD/HH	3RD MM/DD/HH	4TH MM/DD/HH	5TH MM/DD/HH	6TH MM/DD/HH
Beulah - North	2002	OCT-DEC	*** 0	-1.0 00/00/00	-1.0 00/00/00	-1.0 00/00/00	-1.0 00/00/00	-1.0 00/00/00	-1.0 00/00/00

* No standard is currently in effect.

COMPARISON OF AIR QUALITY DATA WITH
THE NORTH DAKOTA AMBIENT AIR QUALITY STANDARDS *

POLLUTANT : Inhalable Continuous PM_{2.5} ($\mu\text{g}/\text{m}^3$)

LOCATION	YEAR	SAMPLING PERIOD	NUM OBS	M A X I M A				24 - HOUR				1HR #>150	24HR #>65
				1ST MM/DD/HH	2ND MM/DD/HH	1ST MM/DD	2ND MM/DD	3RD MM/DD	4TH MM/DD	MEAN			
Beulah - North	2002	OCT-DEC	2200	31.6 10/15/15	31.5 11/12/12	12.9 10/15	11.0 11/12	10.2 12/16	9.7 12/17	5.6			
Fargo NW	2002	OCT-DEC	2173	43.4 11/07/18	40.5 11/07/17	14.4 11/07	10.8 11/09	8.7 11/08	7.9 10/26	3.9			
Hannover	2002	OCT-DEC	2200	49.7 12/23/17	48.5 12/23/09	19.3 12/23	11.2 11/12	11.2 11/08	11.0 11/03	5.7			
TRNP - NU	2002	OCT-DEC	2083	29.3 12/02/08	25.3 10/28/09	9.1 12/17	8.6 10/28	8.5 11/14	8.2 12/02	4.8			

The maximum 1-hour concentration is 49.7 $\mu\text{g}/\text{m}^3$ at Hannover on 12/23/17
The highest 24-hour concentration is 19.3 $\mu\text{g}/\text{m}^3$ at Hannover on 12/23

* The ambient air quality standards are:

FEDERAL Standards -

- 1) 24-hour: 3-year average of 98th percentiles not to exceed 65 $\mu\text{g}/\text{m}^3$.
- 2) Annual: 3-year average not to exceed 15 $\mu\text{g}/\text{m}^3$.

COMPARISON OF AIR QUALITY DATA WITH
THE NORTH DAKOTA AMBIENT AIR QUALITY STANDARDS *

POLLUTANT : Inhalable FRM PM_{2.5} Particulates ($\mu\text{g}/\text{m}^3$)

LOCATION	YEAR	SAMPLING PERIOD	NUM OBS	MIN	M A X I M A 24 - HOUR			ARITH MEAN	# > 65	AM > 15	% >MDV
					1ST MM/DD	2ND MM/DD	3RD MM/DD				
Beulah - North	2002	OCT-DEC	15	2.2	15.5 12/16	7.9 11/16	7.1 11/04	5.2			100.0
Bismarck Residential	2002	OCT-DEC	31	3.1	15.0 11/04	13.9 11/13	12.6 12/16	6.5			100.0
Fargo NW	2002	OCT-DEC	30	1.3	20.0 11/16	18.5 11/07	17.1 11/13	8.4			96.7
TRNP - NU	2002	OCT-DEC	15	2.3	9.7 12/16	6.7 11/16	6.2 12/04	4.7			100.0
TRNP - SU (Painted Canyon)	2002	OCT-DEC	15	1.0	6.9 10/23	6.3 12/04	4.3 10/11	3.2			73.3

The maximum 24-hour concentration is 20.0 $\mu\text{g}/\text{m}^3$ at Fargo NW on 11/16

* The ambient air quality standards are:

FEDERAL Standards -

- 1) 24-hour: 3-year average of 98th percentiles not to exceed 65 $\mu\text{g}/\text{m}^3$.
- 2) Annual: 3-year average not to exceed 15 $\mu\text{g}/\text{m}^3$.

COMPARISON OF AIR QUALITY DATA WITH
THE NORTH DAKOTA AMBIENT AIR QUALITY STANDARDS *

POLLUTANT : Inhalable PM₁₀ Particulates ($\mu\text{g}/\text{m}^3$)

LOCATION	YEAR	SAMPLING PERIOD	NUM OBS	MIN	M A X I M A			ARITH MEAN	#>150	AM>50	% >MDV
					24 - HOUR	1ST MM/DD	2ND MM/DD				
Bismarck Residential	2002	OCT-DEC	15	6.0	22.0 11/04	19.0 12/10	19.0 12/16	12.7			100.0
Dragswolf	2002	OCT-DEC	13	1.6	18.5 12/16	5.7 11/16	5.4 11/10	4.7			61.5
Fargo NW	2002	OCT-DEC	30	1.0	43.0 11/07	28.0 12/10	27.0 12/13	15.3			96.7
TRNP - NU	2002	OCT-DEC	15	4.0	11.0 12/16	10.0 12/04	9.0 10/11	6.8			100.0
White Shield	2002	OCT-DEC	13	3.0	17.0 12/16	8.1 10/17	8.1 10/23	6.0			76.9

The maximum 24-hour concentration is 43.0 $\mu\text{g}/\text{m}^3$ at Fargo NW on 11/07

* The STATE and FEDERAL air quality standards are:

- 1) 150 $\mu\text{g}/\text{m}^3$ maximum averaged over a 24-hour period with no more than one expected exceedance per year.
- 2) 50 $\mu\text{g}/\text{m}^3$ expected annual arithmetic mean.

SECTION THREE

EXCEEDANCE LISTINGS

By Site Date Hour

All Units Are in Parts Per Billion Except Wind Direction (Degrees),
Wind Speed (MPH), CO (PPM), and PM_{2.5} and PM₁₀ ($\mu\text{g}/\text{m}^3$)

The * Identifies the Exceedances

NONE

By Date Hour Site

All Units Are in Parts Per Billion Except Wind Direction (Degrees),
Wind Speed (MPH), CO (PPM), and PM_{2.5} and PM₁₀ ($\mu\text{g}/\text{m}^3$)

The * Identifies the Exceedances

NONE

SECTION FOUR

DATA RECOVERY SUMMARIES/DATA VOID PERIODS

Abbreviations Used in the Data Summaries

Parm = parameter

Poss = possible number of values

Val = actual number of values

$$\text{Recvry} = \text{percent data recovery} = \frac{\text{VAL}}{\text{Poss}} * 100\%$$

L_MDV = number of values less than the minimum detectable value

$$\text{PL_MDV} = \text{percentage of values less than the minimum detectable value} = \frac{\text{L MDV}}{\text{Val}} * 100\%$$

G_MDV = number of values greater than the minimum detectable value

$$\text{PG_MDV} = \text{percentage of values } \underline{\text{greater}} \text{ than the minimum detectable value} = \frac{\text{G MDV}}{\text{Val}} * 100\%$$

Mean = arithmetic mean of the values greater than the minimum detectable value

- Voids -

MALF = machine malfunction

COLL = collection error

BIRD = bird damage to filter

LAB = lab error

AUDT = audit

VTOTAL = total data voids

QA_CHK = zero/span/precision

PREC = precision

POWR = power failure

CALB = calibration

VIO = number of values exceeding the standard

$$\text{P_VOID} = \text{percent data void} = \frac{\text{VTOTAL}}{\text{Poss}} * 100\%$$

Data Recovery Summaries

----- SITE=Amerada Hess - Tioga #1 -----																	
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO	
SO2	2208	2177	98.6	1925	88.4	252	11.6	12.3	0	2	0	0	2	31	1.4	0	
SO2_5	2208	2177	98.6	1791	82.3	386	17.7	24.3	0	2	0	0	2	31	1.4	1	
WD	2208	2208	100.0	0	0.0	2208	100.0	0	0	0	0	0	0	0	0.0		
WS	2208	2198	99.5	0	0.0	2198	100.0	11.2	0	0	0	0	0	10	0.5		

----- SITE=Amerada Hess - Tioga #3 -----																	
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO	
SO2	2208	2177	98.6	1761	80.9	416	19.1	14.5	0	2	0	0	2	31	1.4	0	
SO2_5	2208	2177	98.6	1547	71.1	630	28.9	25.7	0	2	0	0	2	31	1.4	2	

----- SITE=Bear Paw - MGP #3 -----																	
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO	
SO2	2208	2007	90.9	1919	95.6	88	4.4	2.8	187	2	0	9	2	201	9.1	0	
SO2_5	2208	2007	90.9	1776	88.5	231	11.5	3.4	187	2	0	9	2	201	9.1	0	
WD	2208	2190	99.2	0	0.0	2190	100.0	0	1	0	0	0	1	18	0.8		
WS	2208	2165	98.1	0	0.0	2165	100.0	6.6	0	1	0	0	1	43	1.9		

----- SITE=Bear Paw - MGP #5 -----																	
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO	
SO2	2208	2192	99.3	2085	95.1	107	4.9	2.7	0	2	0	11	3	16	0.7	0	
SO2_5	2208	2192	99.3	1950	89.0	242	11.0	3.9	0	2	0	11	3	16	0.7	0	
WD	2208	2206	99.9	0	0.0	2206	100.0	0	1	0	0	0	1	2	0.1		
WS	2208	2206	99.9	0	0.0	2206	100.0	9.6	0	1	0	0	1	2	0.1		

----- SITE=Beulah - North -----																	
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO	
CON PM	2208	2200	99.6	0	0.0	2200	100.0	5.6	0	0	0	8	0	8	0.4	0	
NH3	2208	0	0.0	0	0	0	2208	0	0	0	0	0	2208	100.0	0		
NO2	2208	1987	90.0	794	40.0	1193	60.0	3.7	204	0	0	17	0	221	10.0	0	
O3	2208	2196	99.5	5	0.2	2191	99.8	22.5	0	0	0	12	0	12	0.5	0	
SO2	2208	2195	99.4	1933	88.1	262	11.9	4.4	0	0	0	13	0	13	0.6	0	
SO2_5	2208	2195	99.4	1777	81.0	418	19.0	6.5	0	0	0	13	0	13	0.6	0	
WD	2208	2208	100.0	0	0.0	2208	100.0	0	0	0	0	0	0	0	0.0		
WS	2208	2192	99.3	0	0.0	2192	100.0	11.3	0	0	0	0	0	16	0.7		

Data Recovery

SITE=DGC #12																	
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO	
NO2	2208	2177	98.6	1938	89.0	239	11.0	8.4	0	3	1	21	4	31	1.4	0	
SO2	2208	2192	99.3	1747	79.7	445	20.3	5.1	0	1	1	8	2	16	0.7	0	
WD	2208	2079	94.2	0	0.0	2079	100.0		121	0	1	0	2	129	5.8		
WS	2208	2061	93.3	0	0.0	2061	100.0	10.8	139	0	1	0	2	147	6.7		
SITE=DGC #14																	
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO	
SO2	2208	2167	98.1	1924	88.8	243	11.2	5.3	28	1	0	8	3	41	1.9	0	
SITE=DGC #16																	
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO	
SO2	2208	2187	99	1987	90.9	200	9.1	5.2	0	4	0	9	2	21	1	0	
SITE=DGC #17																	
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO	
NO2	2208	2186	99.0	2024	92.6	162	7.4	8.2	0	4	0	14	3	22	1.0	0	
SO2	2208	2193	99.3	1652	75.3	541	24.7	3.2	0	2	0	10	2	15	0.7	0	
SITE=Dragswolf																	
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO	
WD	2208	2152	97.5	0	0	2152	100		0	0	55	0	0	56	2.5		
WS	2208	2152	97.5	0	0	2152	100	10.3	0	0	55	0	0	56	2.5		
SITE=Dunn Center																	
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO	
NO2	2208	2191	99.2	1566	71.5	625	28.5	2.7	0	1	1	15	0	17	0.8	0	
O3	2208	2198	99.5	0	0.0	2198	100.0	24.0	0	0	1	9	0	10	0.5	0	
SO2	2208	2196	99.5	2015	91.8	181	8.2	2.5	0	0	1	11	0	12	0.5	0	
SO2_5	2208	2196	99.5	1734	79.0	462	21.0	2.5	0	0	1	11	0	12	0.5	0	
WD	2208	2207	100.0	0	0.0	2207	100.0		0	0	1	0	0	1	0.0		
WS	2208	2207	100.0	0	0.0	2207	100.0	8.7	0	0	1	0	0	1	0.0		

Data Recovery

----- SITE=Fargo NW -----																
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO
CON PM	2208	2173	98.4	0	0.0	2173	100.0	3.9	0	1	27	7	0	35	1.6	0
NO2	2208	2139	96.9	463	21.6	1676	78.4	7.5	0	4	27	21	0	69	3.1	0
O3	2208	2166	98.1	152	7.0	2014	93.0	18.3	0	0	27	14	0	42	1.9	0
SO2	2208	2163	98.0	2057	95.1	106	4.9	2.3	0	2	27	15	0	45	2.0	0
SO2_5	2208	2163	98.0	1952	90.2	211	9.8	2.7	0	2	27	15	0	45	2.0	0
WD	2208	2179	98.7	0	0.0	2179	100.0		0	1	27	0	0	29	1.3	
WS	2208	2179	98.7	0	0.0	2179	100.0	10.3	0	1	27	0	0	29	1.3	
----- SITE=Hannover -----																
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO
CON PM	2208	2200	99.6	0	0.0	2200	100.0	5.7	0	0	0	7	1	8	0.4	0
NO2	2208	2187	99.0	1235	56.5	952	43.5	3.7	0	0	0	19	2	21	1.0	0
O3	2208	2194	99.4	11	0.5	2183	99.5	20.5	0	0	0	13	1	14	0.6	0
SO2	2208	2191	99.2	1759	80.3	432	19.7	4.2	0	0	0	15	2	17	0.8	0
SO2_5	2208	2191	99.2	1517	69.2	674	30.8	5.8	0	0	0	15	2	17	0.8	0
WD	2208	2202	99.7	0	0.0	2202	100.0		0	0	0	0	0	6	0.3	
WS	2208	2194	99.4	0	0.0	2194	100.0	15.8	0	0	0	0	0	14	0.6	
----- SITE=Mandan - SPM -----																
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO
SO2	2208	2195	99.4	1361	62.0	834	38.0	11.5	0	3	0	10	0	13	0.6	0
SO2_5	2208	2195	99.4	1088	49.6	1107	50.4	20.0	0	3	0	10	0	13	0.6	0
WD	2208	2208	100.0	0	0.0	2208	100.0		0	0	0	0	0	0	0.0	
WS	2208	2208	100.0	0	0.0	2208	100.0	5.4	0	0	0	0	0	0	0.0	
----- SITE=Mandan NW - SPM -----																
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO
SO2	2208	2102	95.2	1420	67.6	682	32.4	6.2	0	0	93	13	0	106	4.8	0
SO2_5	2208	2102	95.2	1091	51.9	1011	48.1	9.9	0	0	93	13	0	106	4.8	0
WD	2208	2115	95.8	0	0.0	2115	100.0		0	0	93	0	0	93	4.2	
WS	2208	2115	95.8	0	0.0	2115	100.0	10.6	0	0	93	0	0	93	4.2	
----- SITE=TRNP - NU -----																
PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO
CON PM	2208	2140	96.9	0	0.0	2140	100.0	4.8	0	2	1	5	1	68	3.1	0
NO2	2208	2187	99.0	1702	77.8	485	22.2	2.4	0	1	1	17	2	21	1.0	0
O3	2208	2196	99.5	0	0.0	2196	100.0	24.3	0	0	1	10	1	12	0.5	0

Data Recovery

SITE=TRNP - NU
(continued)

PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO
SO2	2208	2192	99.3	2068	94.3	124	5.7	2.4	0	1	1	12	2	16	0.7	0
SO2_5	2208	2192	99.3	1948	88.9	244	11.1	2.6	0	1	1	12	2	16	0.7	0
WD	2208	2207	100.0	0	0.0	2207	100.0		0	0	1	0	0	1	0.0	
WS	2208	2207	100.0	0	0.0	2207	100.0	6.3	0	0	1	0	0	1	0.0	

----- SITE=TRNP - SU (Painted Canyon) -----

PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO
O3	2208	2196	99.5	1	0.0	2195	100.0	24.6	0	1	0	11	0	12	0.5	0
SO2	2208	2196	99.5	2086	95.0	110	5.0	3.0	0	0	0	12	0	12	0.5	0
SO2_5	2208	2196	99.5	1953	88.9	243	11.1	3.3	0	0	0	12	0	12	0.5	0
WS	2208	2208	100.0	0	0.0	2208	100.0	11.2	0	0	0	0	0	0	0.0	

----- SITE=White Shield -----

PARM	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	CALB	POWR	QA_CHK	AUDT	VTOTAL	P_VOID	VIO
SO2	2208	2187	99	2021	92.4	166	7.6	4.4	0	11	0	8	2	21	1	0
WD	2208	2207	100	0	0.0	2207	100.0		0	0	0	0	1	1	0	
WS	2208	2207	100	0	0.0	2207	100.0	10.2	0	0	0	0	1	1	0	

Data Recovery

FRM ₂₅														
SITE	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	COLL	BIRD	LAB	VTOTAL	P_VOID
Beulah - North	15	15	100.0	0	0.0	15	100.0	5.2	0	0	0	0	0	0.0
Bismarck Residential	31	31	100.0	0	0.0	31	100.0	6.5	0	0	0	0	0	0.0
Fargo NW	31	30	96.8	1	3.3	29	96.7	8.6	0	0	0	0	1	3.2
TRNP - NU	15	15	100.0	0	0.0	15	100.0	4.7	0	0	0	0	0	0.0
TRNP - SU (Painted Canyon)	15	15	100.0	4	26.7	11	73.3	4.0	0	0	0	0	0	0.0

PM ₁₀														
SITE	POSS	VAL	RECVRY	L_MDV	PL_MDV	G_MDV	PG_MDV	MEAN	MALF	COLL	BIRD	LAB	VTOTAL	P_VOID
Bismarck Residential	15	15	100.0	0	0.0	15	100.0	12.7	0	0	0	0	0	0.0
Dragswolf	15	13	86.7	5	38.5	8	61.5	6.4	0	0	0	0	2	13.3
Fargo NW	31	30	96.8	1	3.3	29	96.7	15.8	0	0	0	0	1	3.2
TRNP - NU	15	15	100.0	0	0.0	15	100.0	6.8	0	0	0	0	0	0.0
White Shield	15	13	86.7	3	23.1	10	76.9	7.2	0	0	0	0	2	13.3

Data Void Periods

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
Amerada Hess - Tioga #1	SO2	10/07-04	10/07-05	2	AUTO CALIBRATION
		10/14-04	10/14-05	2	AUTO CALIBRATION
		10/21-04	10/21-05	2	AUTO CALIBRATION
		10/28-04	10/28-05	2	AUTO CALIBRATION
		11/04-04	11/04-05	2	AUTO CALIBRATION
		11/11-04	11/11-05	2	AUTO CALIBRATION
		11/18-04	11/18-05	2	AUTO CALIBRATION
		11/25-04	11/25-05	2	AUTO CALIBRATION
		12/02-04	12/02-05	2	AUTO CALIBRATION
		12/04-11	12/04-11	1	AUTO CALIBRATION
		12/04-12	12/04-13	2	Q C AUDIT
		12/04-14	12/04-15	2	MULTI-POINT CALIBRATION
		12/09-04	12/09-05	2	AUTO CALIBRATION
		12/16-04	12/16-05	2	AUTO CALIBRATION
		12/23-04	12/23-05	2	AUTO CALIBRATION
		12/30-04	12/30-05	2	AUTO CALIBRATION
Amerada Hess - Tioga #1	SO2_5 MAX	10/07-04	10/07-05	2	AUTO CALIBRATION
		10/14-04	10/14-05	2	AUTO CALIBRATION
		10/21-04	10/21-05	2	AUTO CALIBRATION
		10/28-04	10/28-05	2	AUTO CALIBRATION
		11/04-04	11/04-05	2	AUTO CALIBRATION
		11/11-04	11/11-05	2	AUTO CALIBRATION
		11/18-04	11/18-05	2	AUTO CALIBRATION
		11/25-04	11/25-05	2	AUTO CALIBRATION
		12/02-04	12/02-05	2	AUTO CALIBRATION
		12/04-11	12/04-11	1	AUTO CALIBRATION
		12/04-12	12/04-13	2	Q C AUDIT
		12/04-14	12/04-15	2	MULTI-POINT CALIBRATION
		12/09-04	12/09-05	2	AUTO CALIBRATION
		12/16-04	12/16-05	2	AUTO CALIBRATION
		12/23-04	12/23-05	2	AUTO CALIBRATION
		12/30-04	12/30-05	2	AUTO CALIBRATION
Amerada Hess - Tioga #1	WS	12/24-03	12/24-12	10	BAD WEATHER
Amerada Hess - Tioga #3	SO2	10/07-14	10/07-15	2	AUTO CALIBRATION
		10/14-14	10/14-15	2	AUTO CALIBRATION
		10/21-14	10/21-15	2	AUTO CALIBRATION
		10/28-15	10/28-16	2	AUTO CALIBRATION
		11/04-15	11/04-16	2	AUTO CALIBRATION
		11/11-14	11/11-15	2	AUTO CALIBRATION
		11/18-14	11/18-15	2	AUTO CALIBRATION
		11/25-14	11/25-15	2	AUTO CALIBRATION
		12/02-14	12/02-15	2	AUTO CALIBRATION
		12/03-17	12/03-17	1	AUTO CALIBRATION

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
Amerada Hess - Tioga #3	SO2	12/03-19	12/03-20	2	Q C AUDIT
		12/04-18	12/04-19	2	MULTI-POINT CALIBRATION
		12/09-14	12/09-15	2	AUTO CALIBRATION
		12/16-14	12/16-15	2	AUTO CALIBRATION
		12/23-14	12/23-15	2	AUTO CALIBRATION
		12/30-14	12/30-15	2	AUTO CALIBRATION
Amerada Hess - Tioga #3	SO2_5 MAX	10/07-14	10/07-15	2	AUTO CALIBRATION
		10/14-14	10/14-15	2	AUTO CALIBRATION
		10/21-14	10/21-15	2	AUTO CALIBRATION
		10/28-15	10/28-16	2	AUTO CALIBRATION
		11/04-15	11/04-16	2	AUTO CALIBRATION
		11/11-14	11/11-15	2	AUTO CALIBRATION
		11/18-14	11/18-15	2	AUTO CALIBRATION
		11/25-14	11/25-15	2	AUTO CALIBRATION
		12/02-14	12/02-15	2	AUTO CALIBRATION
		12/03-17	12/03-17	1	AUTO CALIBRATION
		12/03-19	12/03-20	2	Q C AUDIT
		12/04-18	12/04-19	2	MULTI-POINT CALIBRATION
		12/09-14	12/09-15	2	AUTO CALIBRATION
		12/16-14	12/16-15	2	AUTO CALIBRATION
		12/23-14	12/23-15	2	AUTO CALIBRATION
		12/30-14	12/30-15	2	AUTO CALIBRATION
		12/30-16	12/30-16		
Bear Paw - MGP #3	SO2	10/04-09	10/04-10	2	PRECISION/ZERO/SPAN
		10/09-12	10/17-06	187	MACHINE MALFUNCTION
		10/17-07	10/17-07	1	MAINTENANCE/ROUTINE REPAIRS
		10/18-10	10/18-10	1	PRECISION/ZERO/SPAN
		11/01-09	11/01-09	1	PRECISION/ZERO/SPAN
		11/15-11	11/15-12	2	PRECISION/ZERO/SPAN
		11/20-10	11/20-11	2	Q C AUDIT
		11/27-09	11/27-09	1	PRECISION/ZERO/SPAN
		11/27-10	11/27-11	2	MULTI-POINT CALIBRATION
		12/11-10	12/11-10	1	PRECISION/ZERO/SPAN
		12/24-08	12/24-08	1	PRECISION/ZERO/SPAN
Bear Paw - MGP #3	SO2_5 MAX	10/04-09	10/04-10	2	PRECISION/ZERO/SPAN
		10/09-12	10/17-06	187	MACHINE MALFUNCTION
		10/17-07	10/17-07	1	MAINTENANCE/ROUTINE REPAIRS
		10/18-10	10/18-10	1	PRECISION/ZERO/SPAN
		11/01-09	11/01-09	1	PRECISION/ZERO/SPAN
		11/15-11	11/15-12	2	PRECISION/ZERO/SPAN
		11/20-10	11/20-11	2	Q C AUDIT
		11/27-09	11/27-09	1	PRECISION/ZERO/SPAN
		11/27-10	11/27-11	2	MULTI-POINT CALIBRATION

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
Bear Paw - MGP #3	SO2_5 MAX	12/11-10	12/11-10	1	PRECISION/ZERO/SPAN
		12/24-08	12/24-08	1	PRECISION/ZERO/SPAN
Bear Paw - MGP #3	WS	10/18-10	10/18-10	1	CALIBRATION
		10/28-17	10/30-09	41	BAD WEATHER
		11/20-09	11/20-09	1	Q C AUDIT
Bear Paw - MGP #3	WD	10/18-10	10/18-10	1	CALIBRATION
		10/29-18	10/30-09	16	BAD WEATHER
		11/20-09	11/20-09	1	Q C AUDIT
Bear Paw - MGP #3	SIGMA	10/18-10	10/18-10	1	CALIBRATION
		10/29-18	10/30-09	16	BAD WEATHER
		11/20-09	11/20-09	1	Q C AUDIT
Bear Paw - MGP #3	TEMP	10/18-10	10/18-10	1	CALIBRATION
		10/29-19	10/30-07	13	BAD WEATHER
		11/20-09	11/20-09	1	Q C AUDIT
Bear Paw - MGP #5	SO2	10/04-12	10/04-12	1	PRECISION/ZERO/SPAN
		10/18-08	10/18-09	2	PRECISION/ZERO/SPAN
		11/01-09	11/01-10	2	PRECISION/ZERO/SPAN
		11/15-09	11/15-11	3	PRECISION/ZERO/SPAN
		11/20-12	11/20-14	3	Q C AUDIT
		11/27-12	11/27-12	1	PRECISION/ZERO/SPAN
		11/27-13	11/27-14	2	MULTI-POINT CALIBRATION
		12/11-09	12/11-09	1	PRECISION/ZERO/SPAN
		12/24-09	12/24-09	1	PRECISION/ZERO/SPAN
Bear Paw - MGP #5	SO2_5 MAX	10/04-12	10/04-12	1	PRECISION/ZERO/SPAN
		10/18-08	10/18-09	2	PRECISION/ZERO/SPAN
		11/01-09	11/01-10	2	PRECISION/ZERO/SPAN
		11/15-09	11/15-11	3	PRECISION/ZERO/SPAN
		11/20-12	11/20-14	3	Q C AUDIT
		11/27-12	11/27-12	1	PRECISION/ZERO/SPAN
		11/27-13	11/27-14	2	MULTI-POINT CALIBRATION
		12/11-09	12/11-09	1	PRECISION/ZERO/SPAN
		12/24-09	12/24-09	1	PRECISION/ZERO/SPAN
Bear Paw - MGP #5	WS	10/18-08	10/18-08	1	CALIBRATION
		11/20-13	11/20-13	1	Q C AUDIT
Bear Paw - MGP #5	WD	10/18-08	10/18-08	1	CALIBRATION
		11/20-13	11/20-13	1	Q C AUDIT
Bear Paw - MGP #5	SIGMA	10/18-08	10/18-08	1	CALIBRATION

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
Bear Paw - MGP #5	SIGMA	11/20-13	11/20-13	1	Q C AUDIT
Bear Paw - MGP #5	TEMP	10/18-08	10/18-08	1	CALIBRATION
		10/29-22	10/30-07	10	BAD WEATHER
		11/20-13	11/20-13	1	Q C AUDIT
Beulah - North	SO2	10/14-08	10/14-09	2	PRECISION/ZERO/SPAN
		10/28-09	10/28-10	2	PRECISION/ZERO/SPAN
		11/12-09	11/12-10	2	PRECISION/ZERO/SPAN
		11/25-09	11/25-10	2	PRECISION/ZERO/SPAN
		12/09-09	12/09-10	2	PRECISION/ZERO/SPAN
		12/23-09	12/23-11	3	PRECISION/ZERO/SPAN
Beulah - North	SO2_5 MAX	10/14-08	10/14-09	2	PRECISION/ZERO/SPAN
		10/28-09	10/28-10	2	PRECISION/ZERO/SPAN
		11/12-09	11/12-10	2	PRECISION/ZERO/SPAN
		11/25-09	11/25-10	2	PRECISION/ZERO/SPAN
		12/09-09	12/09-10	2	PRECISION/ZERO/SPAN
		12/23-09	12/23-11	3	PRECISION/ZERO/SPAN
Beulah - North	NO2	10/14-08	10/14-10	3	PRECISION/ZERO/SPAN
		10/28-09	10/28-11	3	PRECISION/ZERO/SPAN
		11/12-09	11/12-10	2	PRECISION/ZERO/SPAN
		11/25-09	11/25-11	3	PRECISION/ZERO/SPAN
		12/09-09	12/09-11	3	PRECISION/ZERO/SPAN
		12/23-09	12/23-11	3	PRECISION/ZERO/SPAN
		12/23-12	12/31-23	204	MACHINE MALFUNCTION
Beulah - North	NH3	10/01-00	12/31-23	2208	MACHINE MALFUNCTION
Beulah - North	O3	10/14-10	10/14-11	2	PRECISION/ZERO/SPAN
		10/28-11	10/28-12	2	PRECISION/ZERO/SPAN
		11/12-10	11/12-11	2	PRECISION/ZERO/SPAN
		11/25-11	11/25-12	2	PRECISION/ZERO/SPAN
		12/09-11	12/09-12	2	PRECISION/ZERO/SPAN
		12/23-11	12/23-12	2	PRECISION/ZERO/SPAN
Beulah - North	WS	12/18-02	12/18-12	11	BAD WEATHER
		12/28-05	12/28-09	5	BAD WEATHER
Beulah - North	Cont. PM2.5	10/14-10	10/14-10	1	PRECISION CHECK
		10/28-10	10/28-10	1	PRECISION CHECK
		11/12-09	11/12-09	1	PRECISION CHECK
		11/25-11	11/25-12	2	PRECISION CHECK
		12/09-09	12/09-10	2	PRECISION CHECK
		12/23-10	12/23-10	1	PRECISION CHECK

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
DGC #12	SO2	10/09-07	10/09-08	2	PRECISION/ZERO/SPAN
		10/21-11	10/21-11	1	PRECISION/ZERO/SPAN
		11/04-12	11/04-12	1	PRECISION/ZERO/SPAN
		11/07-13	11/07-13	1	MAINTENANCE/ROUTINE REPAIRS
		11/13-08	11/13-08	1	POWER FAILURE
		11/19-07	11/19-07	1	PRECISION/ZERO/SPAN
		11/19-08	11/19-10	3	MAINTENANCE/ROUTINE REPAIRS
		11/19-11	11/19-11	1	MULTI-POINT CALIBRATION
		12/03-08	12/03-08	1	PRECISION/ZERO/SPAN
		12/11-07	12/11-08	2	Q C AUDIT
		12/18-12	12/18-12	1	PRECISION/ZERO/SPAN
		12/30-08	12/30-08	1	PRECISION/ZERO/SPAN
DGC #12	NO2	10/08-10	10/08-12	3	PRECISION/ZERO/SPAN
		10/22-09	10/22-12	4	PRECISION/ZERO/SPAN
		11/05-11	11/05-13	3	PRECISION/ZERO/SPAN
		11/07-13	11/07-13	1	MAINTENANCE/ROUTINE REPAIRS
		11/13-08	11/13-08	1	POWER FAILURE
		11/20-08	11/20-09	2	PRECISION/ZERO/SPAN
		11/20-10	11/20-10	1	MAINTENANCE/ROUTINE REPAIRS
		11/20-11	11/20-13	3	MULTI-POINT CALIBRATION
		12/04-11	12/04-13	3	PRECISION/ZERO/SPAN
		12/10-11	12/10-14	4	Q C AUDIT
		12/19-11	12/19-13	3	PRECISION/ZERO/SPAN
		12/30-11	12/30-13	3	PRECISION/ZERO/SPAN
DGC #12	WS	10/28-17	10/29-10	18	MACHINE MALFUNCTION
		10/29-11	10/29-12	2	MAINTENANCE/ROUTINE REPAIRS
		11/04-12	11/04-12	1	MULTI-POINT CALIBRATION
		11/13-08	11/13-08	1	POWER FAILURE
		11/20-12	11/20-12	1	MAINTENANCE/ROUTINE REPAIRS
		11/21-08	11/21-09	2	Q C AUDIT
		12/26-11	12/30-07	93	MACHINE MALFUNCTION
		12/30-08	12/30-08	1	MAINTENANCE/ROUTINE REPAIRS
		12/30-20	12/31-23	28	MACHINE MALFUNCTION
DGC #12	WD	10/29-11	10/29-12	2	MAINTENANCE/ROUTINE REPAIRS
		11/04-12	11/04-12	1	MULTI-POINT CALIBRATION
		11/13-08	11/13-08	1	POWER FAILURE
		11/20-12	11/20-12	1	MAINTENANCE/ROUTINE REPAIRS
		11/21-08	11/21-09	2	Q C AUDIT
		12/26-11	12/30-07	93	MACHINE MALFUNCTION
		12/30-08	12/30-08	1	MAINTENANCE/ROUTINE REPAIRS
		12/30-20	12/31-23	28	MACHINE MALFUNCTION
DGC #12	SIGMA	10/29-11	10/29-12	2	MAINTENANCE/ROUTINE REPAIRS

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
DGC #12	SIGMA	11/04-12	11/04-12	1	MULTI-POINT CALIBRATION
		11/13-08	11/13-08	1	POWER FAILURE
		11/20-12	11/20-12	1	MAINTENANCE/ROUTINE REPAIRS
		11/21-08	11/21-09	2	Q C AUDIT
		12/26-11	12/30-07	93	MACHINE MALFUNCTION
		12/30-08	12/30-08	1	MAINTENANCE/ROUTINE REPAIRS
		12/30-20	12/31-23	28	MACHINE MALFUNCTION
DGC #12	TEMP	10/29-11	10/29-12	2	MAINTENANCE/ROUTINE REPAIRS
		11/04-12	11/04-12	1	MULTI-POINT CALIBRATION
		11/13-08	11/13-08	1	POWER FAILURE
		11/20-12	11/20-12	1	MAINTENANCE/ROUTINE REPAIRS
		11/21-08	11/21-09	2	Q C AUDIT
DGC #14	SO2	10/07-11	10/07-11	1	PRECISION/ZERO/SPAN
		10/07-12	10/07-12	1	MAINTENANCE/ROUTINE REPAIRS
		10/23-10	10/23-11	2	PRECISION/ZERO/SPAN
		10/24-08	10/25-11	28	MACHINE MALFUNCTION
		11/06-12	11/06-12	1	PRECISION/ZERO/SPAN
		11/06-13	11/06-13	1	MULTI-POINT CALIBRATION
		11/18-12	11/18-12	1	PRECISION/ZERO/SPAN
		12/05-12	12/05-12	1	PRECISION/ZERO/SPAN
		12/10-07	12/10-09	3	Q C AUDIT
		12/17-11	12/17-12	2	PRECISION/ZERO/SPAN
DGC #16	SO2	10/16-11	10/16-11	1	PRECISION/ZERO/SPAN
		10/28-12	10/28-12	1	PRECISION/ZERO/SPAN
		10/29-09	10/29-09	1	PRECISION/ZERO/SPAN
		10/29-10	10/29-12	3	MAINTENANCE/ROUTINE REPAIRS
		10/29-13	10/29-14	2	MULTI-POINT CALIBRATION
		10/30-08	10/30-08	1	Q C CONTROL POINTS
		10/30-09	10/30-11	3	MAINTENANCE/ROUTINE REPAIRS
		10/30-12	10/30-13	2	MULTI-POINT CALIBRATION
		11/13-13	11/13-13	1	PRECISION/ZERO/SPAN
		11/25-08	11/25-08	1	PRECISION/ZERO/SPAN
		12/10-12	12/10-12	1	PRECISION/ZERO/SPAN
		12/11-12	12/11-13	2	Q C AUDIT
		12/26-07	12/26-08	2	PRECISION/ZERO/SPAN
DGC #17	SO2	10/01-11	10/01-12	2	PRECISION/ZERO/SPAN
		10/15-11	10/15-11	1	PRECISION/ZERO/SPAN
		10/31-12	10/31-13	2	PRECISION/ZERO/SPAN
		11/11-11	11/11-11	1	PRECISION/ZERO/SPAN
		11/11-12	11/11-12	1	MAINTENANCE/ROUTINE REPAIRS
		11/11-13	11/11-14	2	MULTI-POINT CALIBRATION
		11/25-12	11/25-12	1	PRECISION/ZERO/SPAN

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
DGC #17	SO2	12/09-09	12/09-09	1	PRECISION/ZERO/SPAN
		12/12-07	12/12-08	2	Q C AUDIT
		12/26-08	12/26-09	2	PRECISION/ZERO/SPAN
DGC #17	NO2	10/02-11	10/02-12	2	PRECISION/ZERO/SPAN
		10/14-11	10/14-12	2	PRECISION/ZERO/SPAN
		11/01-12	11/01-13	2	PRECISION/ZERO/SPAN
		11/12-08	11/12-09	2	PRECISION/ZERO/SPAN
		11/12-10	11/12-10	1	MAINTENANCE/ROUTINE REPAIRS
		11/12-11	11/12-14	4	MULTI-POINT CALIBRATION
		11/26-12	11/26-13	2	PRECISION/ZERO/SPAN
		12/09-12	12/09-13	2	PRECISION/ZERO/SPAN
		12/12-11	12/12-13	3	Q C AUDIT
		12/27-08	12/27-09	2	PRECISION/ZERO/SPAN
Dragswolf	WS	10/30-03	11/01-09	55	POWER FAILURE
		11/21-08	11/21-08	1	MAINTENANCE/ROUTINE REPAIRS
Dragswolf	WD	10/30-03	11/01-09	55	POWER FAILURE
		11/21-08	11/21-08	1	MAINTENANCE/ROUTINE REPAIRS
Dragswolf	SIGMA	10/30-03	11/01-09	55	POWER FAILURE
		11/21-08	11/21-08	1	MAINTENANCE/ROUTINE REPAIRS
Dragswolf	TEMP	10/30-03	11/01-09	55	POWER FAILURE
		11/21-08	11/21-08	1	MAINTENANCE/ROUTINE REPAIRS
Dragswolf	PM10	12/22-00	12/22-23	24	SCHEDULED BUT NOT COLLECTED
		12/28-00	12/28-23	24	SCHEDULED BUT NOT COLLECTED
Dunn Center	SO2	10/08-10	10/08-11	2	PRECISION/ZERO/SPAN
		10/15-11	10/15-11	1	POWER FAILURE
		10/22-10	10/22-11	2	PRECISION/ZERO/SPAN
		11/05-11	11/05-12	2	PRECISION/ZERO/SPAN
		11/19-11	11/19-12	2	PRECISION/ZERO/SPAN
		12/03-11	12/03-11	1	PRECISION/ZERO/SPAN
		12/17-11	12/17-12	2	PRECISION/ZERO/SPAN
Dunn Center	SO2_5 MAX	10/08-10	10/08-11	2	PRECISION/ZERO/SPAN
		10/15-11	10/15-11	1	POWER FAILURE
		10/22-10	10/22-11	2	PRECISION/ZERO/SPAN
		11/05-11	11/05-12	2	PRECISION/ZERO/SPAN
		11/19-11	11/19-12	2	PRECISION/ZERO/SPAN
		12/03-11	12/03-11	1	PRECISION/ZERO/SPAN
		12/17-11	12/17-12	2	PRECISION/ZERO/SPAN

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
Dunn Center	NO2	10/08-10	10/08-11	2	PRECISION/ZERO/SPAN
		10/15-11	10/15-11	1	POWER FAILURE
		10/22-10	10/22-12	3	PRECISION/ZERO/SPAN
		11/05-11	11/05-12	2	PRECISION/ZERO/SPAN
		11/05-13	11/05-13	1	CALIBRATION
		11/19-11	11/19-13	3	PRECISION/ZERO/SPAN
		12/03-11	12/03-12	2	PRECISION/ZERO/SPAN
		12/17-11	12/17-13	3	PRECISION/ZERO/SPAN
Dunn Center	O3	10/08-11	10/08-12	2	PRECISION/ZERO/SPAN
		10/15-11	10/15-11	1	POWER FAILURE
		10/22-12	10/22-12	1	PRECISION/ZERO/SPAN
		11/05-12	11/05-13	2	PRECISION/ZERO/SPAN
		11/19-13	11/19-13	1	PRECISION/ZERO/SPAN
		12/03-12	12/03-13	2	PRECISION/ZERO/SPAN
		12/17-13	12/17-13	1	PRECISION/ZERO/SPAN
Dunn Center	WS	10/15-11	10/15-11	1	POWER FAILURE
Dunn Center	WD	10/15-11	10/15-11	1	POWER FAILURE
Dunn Center	SIGMA	10/15-11	10/15-11	1	POWER FAILURE
Dunn Center	TEMP	10/15-11	10/15-11	1	POWER FAILURE
Fargo NW	SO2	10/07-11	10/07-13	3	PRECISION/ZERO/SPAN
		10/07-14	10/07-14	1	MAINTENANCE/ROUTINE REPAIRS
		10/22-11	10/22-12	2	PRECISION/ZERO/SPAN
		11/04-12	11/04-13	2	PRECISION/ZERO/SPAN
		11/18-12	11/18-13	2	PRECISION/ZERO/SPAN
		12/04-12	12/04-13	2	PRECISION/ZERO/SPAN
		12/05-08	12/05-09	2	CALIBRATION
		12/16-11	12/16-12	2	PRECISION/ZERO/SPAN
		12/18-15	12/19-17	27	POWER FAILURE
		12/30-12	12/30-13	2	PRECISION/ZERO/SPAN
Fargo NW	SO2_5 MAX	10/07-11	10/07-13	3	PRECISION/ZERO/SPAN
		10/07-14	10/07-14	1	MAINTENANCE/ROUTINE REPAIRS
		10/22-11	10/22-12	2	PRECISION/ZERO/SPAN
		11/04-12	11/04-13	2	PRECISION/ZERO/SPAN
		11/18-12	11/18-13	2	PRECISION/ZERO/SPAN
		12/04-12	12/04-13	2	PRECISION/ZERO/SPAN
		12/05-08	12/05-09	2	CALIBRATION
		12/16-11	12/16-12	2	PRECISION/ZERO/SPAN
		12/18-15	12/19-17	27	POWER FAILURE
		12/30-12	12/30-13	2	PRECISION/ZERO/SPAN

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
Fargo NW	NO2	10/07-11	10/07-13	3	PRECISION/ZERO/SPAN
		10/07-14	10/07-14	1	MAINTENANCE/ROUTINE REPAIRS
		10/22-11	10/22-13	3	PRECISION/ZERO/SPAN
		11/04-12	11/04-14	3	PRECISION/ZERO/SPAN
		11/18-12	11/18-14	3	PRECISION/ZERO/SPAN
		12/04-12	12/04-14	3	PRECISION/ZERO/SPAN
		12/04-15	12/05-06	16	MISCELLANEOUS VOID
		12/05-07	12/05-10	4	CALIBRATION
		12/16-11	12/16-13	3	PRECISION/ZERO/SPAN
		12/18-15	12/19-17	27	POWER FAILURE
		12/30-12	12/30-14	3	PRECISION/ZERO/SPAN
Fargo NW	O3	10/07-13	10/07-13	1	PRECISION/ZERO/SPAN
		10/07-14	10/07-14	1	MAINTENANCE/ROUTINE REPAIRS
		10/22-13	10/22-14	2	PRECISION/ZERO/SPAN
		11/04-14	11/04-15	2	PRECISION/ZERO/SPAN
		11/18-14	11/18-15	2	PRECISION/ZERO/SPAN
		12/04-13	12/04-15	3	PRECISION/ZERO/SPAN
		12/16-13	12/16-14	2	PRECISION/ZERO/SPAN
		12/18-15	12/19-17	27	POWER FAILURE
		12/30-14	12/30-15	2	PRECISION/ZERO/SPAN
Fargo NW	WS	10/22-12	10/22-12	1	MAINTENANCE/ROUTINE REPAIRS
		10/22-13	10/22-13	1	CALIBRATION
		12/18-15	12/19-17	27	POWER FAILURE
Fargo NW	WD	10/22-12	10/22-12	1	MAINTENANCE/ROUTINE REPAIRS
		10/22-13	10/22-13	1	CALIBRATION
		12/18-15	12/19-17	27	POWER FAILURE
Fargo NW	SIGMA	10/22-12	10/22-12	1	MAINTENANCE/ROUTINE REPAIRS
		10/22-13	10/22-13	1	CALIBRATION
		12/18-15	12/19-17	27	POWER FAILURE
Fargo NW	TEMP	12/18-15	12/19-17	27	POWER FAILURE
Fargo NW	TEMP DIF.	12/18-15	12/19-17	27	POWER FAILURE
Fargo NW	RH	12/18-15	12/19-17	27	POWER FAILURE
Fargo NW	SOLAR RAD	12/18-15	12/19-17	27	POWER FAILURE
Fargo NW	PM10	12/19-00	12/19-23	24	POWER FAILURE
Fargo NW	PM2.5	12/19-00	12/19-23	24	SAMPLE TIME OUT OF LIMITS

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
Fargo NW	Cont. PM2.5	10/07-13	10/07-13	1	PRECISION CHECK
		10/22-13	10/22-13	1	PRECISION CHECK
		11/04-14	11/04-14	1	PRECISION CHECK
		11/18-12	11/18-12	1	PRECISION CHECK
		12/04-14	12/04-14	1	PRECISION CHECK
		12/04-15	12/04-15	1	CALIBRATION
		12/16-12	12/16-12	1	PRECISION CHECK
		12/18-15	12/19-17	27	POWER FAILURE
		12/30-14	12/30-14	1	PRECISION CHECK
Hannover	SO2	10/01-08	10/01-09	2	PRECISION/ZERO/SPAN
		10/15-08	10/15-09	2	PRECISION/ZERO/SPAN
		10/29-09	10/29-10	2	PRECISION/ZERO/SPAN
		11/14-09	11/14-10	2	PRECISION/ZERO/SPAN
		11/26-08	11/26-10	3	PRECISION/ZERO/SPAN
		12/10-08	12/10-09	2	Q C AUDIT
		12/10-10	12/10-10	1	PRECISION/ZERO/SPAN
		12/26-08	12/26-10	3	PRECISION/ZERO/SPAN
Hannover	SO2_5 MAX	10/01-08	10/01-09	2	PRECISION/ZERO/SPAN
		10/15-08	10/15-09	2	PRECISION/ZERO/SPAN
		10/29-09	10/29-10	2	PRECISION/ZERO/SPAN
		11/14-09	11/14-10	2	PRECISION/ZERO/SPAN
		11/26-08	11/26-10	3	PRECISION/ZERO/SPAN
		12/10-08	12/10-09	2	Q C AUDIT
		12/10-10	12/10-10	1	PRECISION/ZERO/SPAN
		12/26-08	12/26-10	3	PRECISION/ZERO/SPAN
Hannover	NO2	10/01-08	10/01-10	3	PRECISION/ZERO/SPAN
		10/15-08	10/15-09	2	PRECISION/ZERO/SPAN
		10/29-09	10/29-10	2	PRECISION/ZERO/SPAN
		11/14-09	11/14-11	3	PRECISION/ZERO/SPAN
		11/26-08	11/26-11	4	PRECISION/ZERO/SPAN
		12/10-08	12/10-09	2	Q C AUDIT
		12/10-10	12/10-11	2	PRECISION/ZERO/SPAN
		12/26-08	12/26-10	3	PRECISION/ZERO/SPAN
Hannover	O3	10/01-10	10/01-11	2	PRECISION/ZERO/SPAN
		10/15-09	10/15-10	2	PRECISION/ZERO/SPAN
		10/29-10	10/29-11	2	PRECISION/ZERO/SPAN
		11/14-11	11/14-12	2	PRECISION/ZERO/SPAN
		11/26-11	11/26-12	2	PRECISION/ZERO/SPAN
		12/10-10	12/10-10	1	Q C AUDIT
		12/10-11	12/10-11	1	PRECISION/ZERO/SPAN
		12/26-10	12/26-11	2	PRECISION/ZERO/SPAN

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
Hannover	WS	12/18-02	12/18-15	14	BAD WEATHER
Hannover	WD	12/18-02	12/18-07	6	BAD WEATHER
Hannover	SIGMA	12/18-02	12/18-07	6	BAD WEATHER
Hannover	Cont. PM2.5	10/01-08 10/15-08 10/29-10 11/14-09 11/26-09 12/10-09 12/10-10 12/26-09	10/01-08 10/15-08 10/29-10 11/14-09 11/26-09 12/10-09 12/10-10 12/26-09	1 1 1 1 1 1 1 1	PRECISION CHECK PRECISION CHECK PRECISION CHECK PRECISION CHECK PRECISION CHECK Q C AUDIT PRECISION CHECK PRECISION CHECK
Mandan - SPM	SO2	10/01-12 10/01-13 10/17-12 10/17-14 10/30-14 11/14-15 11/26-15 12/10-14 12/24-10	10/01-12 10/01-14 10/17-13 10/17-14 10/30-15 11/14-15 11/26-15 12/10-14 12/24-11	1 2 2 1 2 1 1 1 2	PRECISION/ZERO/SPAN CALIBRATION PRECISION/ZERO/SPAN CALIBRATION PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN
Mandan - SPM	SO2_5 MAX	10/01-12 10/01-13 10/17-12 10/17-14 10/30-14 11/14-15 11/26-15 12/10-14 12/24-10	10/01-12 10/01-14 10/17-13 10/17-14 10/30-15 11/14-15 11/26-15 12/10-14 12/24-11	1 2 2 1 2 1 1 1 2	PRECISION/ZERO/SPAN CALIBRATION PRECISION/ZERO/SPAN CALIBRATION PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN
Mandan NW - SPM	SO2	10/07-10 10/21-09 11/04-11 11/15-12 11/19-09 12/02-09 12/17-08 12/31-08	10/07-10 10/21-10 11/04-12 11/19-08 11/19-10 12/02-10 12/17-09 12/31-09	1 2 2 93 2 2 2 2	PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN POWER FAILURE PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN
Mandan NW - SPM	SO2_5 MAX	10/07-10 10/21-09	10/07-10 10/21-10	1 2	PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
Mandan NW - SPM	SO2_5 MAX	11/04-11	11/04-12	2	PRECISION/ZERO/SPAN
		11/15-12	11/19-08	93	POWER FAILURE
		11/19-09	11/19-10	2	PRECISION/ZERO/SPAN
		12/02-09	12/02-10	2	PRECISION/ZERO/SPAN
		12/17-08	12/17-09	2	PRECISION/ZERO/SPAN
		12/31-08	12/31-09	2	PRECISION/ZERO/SPAN
Mandan NW - SPM	WS	11/15-12	11/19-08	93	POWER FAILURE
Mandan NW - SPM	WD	11/15-12	11/19-08	93	POWER FAILURE
Mandan NW - SPM	SIGMA	11/15-12	11/19-08	93	POWER FAILURE
Mandan NW - SPM	TEMP	11/15-12	11/19-08	93	POWER FAILURE
TRNP - NU	SO2	10/02-11	10/02-12	2	PRECISION/ZERO/SPAN
		10/03-10	10/03-10	1	POWER FAILURE
		10/16-11	10/16-12	2	PRECISION/ZERO/SPAN
		10/29-12	10/29-13	2	PRECISION/ZERO/SPAN
		11/13-11	11/13-12	2	PRECISION/ZERO/SPAN
		11/27-12	11/27-13	2	PRECISION/ZERO/SPAN
		12/11-10	12/11-11	2	Q C AUDIT
		12/11-12	12/11-12	1	PRECISION/ZERO/SPAN
		12/26-12	12/26-12	1	PRECISION/ZERO/SPAN
		12/26-13	12/26-13	1	CALIBRATION
TRNP - NU	SO2_5 MAX	10/02-11	10/02-12	2	PRECISION/ZERO/SPAN
		10/03-10	10/03-10	1	POWER FAILURE
		10/16-11	10/16-12	2	PRECISION/ZERO/SPAN
		10/29-12	10/29-13	2	PRECISION/ZERO/SPAN
		11/13-11	11/13-12	2	PRECISION/ZERO/SPAN
		11/27-12	11/27-13	2	PRECISION/ZERO/SPAN
		12/11-10	12/11-11	2	Q C AUDIT
		12/11-12	12/11-12	1	PRECISION/ZERO/SPAN
		12/26-12	12/26-12	1	PRECISION/ZERO/SPAN
		12/26-13	12/26-13	1	CALIBRATION
TRNP - NU	NO2	10/02-11	10/02-12	2	PRECISION/ZERO/SPAN
		10/03-10	10/03-10	1	POWER FAILURE
		10/16-11	10/16-13	3	PRECISION/ZERO/SPAN
		10/29-12	10/29-14	3	PRECISION/ZERO/SPAN
		11/13-11	11/13-13	3	PRECISION/ZERO/SPAN
		11/27-12	11/27-13	2	PRECISION/ZERO/SPAN
		12/11-10	12/11-11	2	Q C AUDIT
		12/11-12	12/11-13	2	PRECISION/ZERO/SPAN
		12/26-12	12/26-13	2	PRECISION/ZERO/SPAN

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
TRNP - NU	NO2	12/26-14	12/26-14	1	CALIBRATION
TRNP - NU	O3	10/02-12 10/03-10 10/16-13 10/29-14 11/13-13 11/27-13 12/11-11 12/11-12 12/26-14	10/02-13 10/03-10 10/16-13 10/29-14 11/13-14 11/27-13 12/11-11 12/11-12 12/26-15	2 1 1 1 2 1 1 1 2	PRECISION/ZERO/SPAN POWER FAILURE PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN Q C AUDIT PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN
TRNP - NU	WS	10/03-10	10/03-10	1	POWER FAILURE
TRNP - NU	WD	10/03-10	10/03-10	1	POWER FAILURE
TRNP - NU	SIGMA	10/03-10	10/03-10	1	POWER FAILURE
TRNP - NU	TEMP	10/03-10	10/03-10	1	POWER FAILURE
TRNP - NU	RH	10/03-10	10/03-10	1	POWER FAILURE
TRNP - NU	Cont. PM2.5	10/01-00 10/03-10 10/03-11 10/03-12 10/29-13 11/13-12 11/27-12 12/11-11 12/11-12 12/26-14	10/03-09 10/03-10 10/03-11 10/03-13 10/29-13 11/13-12 11/27-12 12/11-11 12/11-12 12/26-14	58 1 1 2 1 1 1 1 1 1	MISCELLANEOUS VOID POWER FAILURE MISCELLANEOUS VOID CALIBRATION PRECISION CHECK PRECISION CHECK PRECISION CHECK Q C AUDIT PRECISION CHECK PRECISION CHECK
TRNP - SU (Painted Canyon)	SO2	10/09-10 10/23-10 11/06-11 11/20-12 12/04-12 12/18-11 12/31-11	10/09-11 10/23-11 11/06-12 11/20-12 12/04-12 12/18-12 12/31-12	2 2 2 1 1 2 2	PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN
TRNP - SU (Painted Canyon)	SO2_5 MAX	10/09-10 10/23-10 11/06-11 11/20-12 12/04-12	10/09-11 10/23-11 11/06-12 11/20-12 12/04-12	2 2 2 1 1	PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN

DATA VOID PERIODS

SITE	PARAMETER	START DATE-HR	END DATE-HR	TOTAL HOURS	REASON FOR DATA VOID
TRNP - SU (Painted Canyon)	SO2_5 MAX	12/18-11 12/31-11	12/18-12 12/31-12	2 2	PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN
TRNP - SU (Painted Canyon)	O3	10/09-11 10/23-10 11/06-12 11/20-13 12/04-13 12/04-14 12/18-12 12/31-12	10/09-11 10/23-11 11/06-13 11/20-13 12/04-13 12/04-14 12/18-13 12/31-13	1 2 2 1 1 1 2 2	PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN CALIBRATION PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN
White Shield	SO2	10/04-13 10/21-12 11/07-09 11/21-15 11/29-13 12/05-14 12/16-10 12/17-13	10/04-14 10/21-13 11/07-10 11/21-16 11/29-14 12/05-16 12/16-14 12/17-15	2 2 2 2 2 3 5 3	PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN PRECISION/ZERO/SPAN Q C AUDIT PRECISION/ZERO/SPAN MULTI-POINT CALIBRATION MULTI-POINT CALIBRATION MULTI-POINT CALIBRATION
White Shield	WS	11/21-15	11/21-15	1	Q C AUDIT
White Shield	WD	11/21-15	11/21-15	1	Q C AUDIT
White Shield	SIGMA	11/21-15	11/21-15	1	Q C AUDIT
White Shield	TEMP	11/21-15	11/21-15	1	Q C AUDIT
White Shield	PM10	12/22-00 12/28-00	12/22-23 12/28-23	24 24	SCHEULED BUT NOT COLLECTED SCHEULED BUT NOT COLLECTED